

# Draft STAR Run 4 Pre-beam Testing Plan

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## Introduction

The purpose of this document is to provide the appropriate level of organization to the myriad sub system, and Global STAR level testing, that will occur before we loose ready access to the Detector for Run 4. To be specific, the goal of this document is to organize the effort on and around the STAR Detector during the period between when STAR is back in the Wide Angle Hall (WAH) with all utilities connected and when we get “locked” out of the WAH for the start of RHIC beam operations.

A general strategy that we’ve used for previous runs has been to have a period of “Stand alone Sub system testing”, towards the end of which the sub systems get sequentially integrated into an integrated Trigger and DAQ system. This has been followed by approximately a week of “Integrated Testing and debugging” of the tied together STAR Detector electronics systems, a brief period for repairs or alterations, and then about 5 days or so of testing the Integrated system with counting gas in the detectors. As is seen by some of the schedule dates in the following section of this document, the time available to follow this general testing scenario will be limited.

## Overall Schedule:

Detector move from AB to WAH:

Power and utility disconnection in AB starts on Wed. Oct. 15th

Detector physically moves Mon. Oct. 20<sup>th</sup> to Tues. Oct. 21<sup>st</sup>

Reconnection of utilities Tues. Oct. 21<sup>st</sup> to Fri. Oct. 24<sup>th</sup>

Vacuum pipe hookup and Bakeout Wed. Oct. 22<sup>nd</sup> to Wed. Oct. 29<sup>th</sup>

STAR Interlock System (SGIS) recertification Mon. Oct 27<sup>th</sup> through Tues. Oct. 28<sup>th</sup>

Shield wall construction Mon. Nov. 17<sup>th</sup> to Wed. Nov. 19<sup>th</sup>

West Poletip test insertion and EEMC Inst. Wrk Wed. Nov. 5<sup>th</sup> to Mon. Nov. 10<sup>th</sup>

Final Poletip installation Thurs. Nov. 20<sup>th</sup> to Fri. Nov. 21<sup>st</sup>

BBC Installation Fri. Nov. 21<sup>st</sup> to Mon. Nov. 24<sup>th</sup>

Beam in Cave Mon. evening, Nov. 24<sup>th</sup>

STAR Testing/tuning continues.

## Draft testing Schedule for “Stand Alone Testing phase”:

Activities in region of TPC faces:

TPC FEE & RDO testing/swapping Mon. Oct. 27<sup>th</sup> to Mon. Nov. 2<sup>nd</sup>

SVT Readout Board testing Wed. Oct. 29<sup>th</sup> to Wed. Nov. 5<sup>th</sup>

SSD Electronics testing Wed. Oct. 29<sup>th</sup> to ?

BEMC SMD FEE testing Wed. Oct. 29<sup>th</sup> to ?

TOF tray removal/installation/testing ? to ?

PMD Stand alone testing continuous with break for shield wall installation.

EEMC installation, calibration and stand alone testing ? to ?

BEMC debugging, calibration and stand alone testing Wed. Oct. 29<sup>th</sup> to ?

FPD and BBC stand alone testing Wed. Oct. 22<sup>nd</sup> to Wed. Nov. 5<sup>th</sup>

Trigger debugging and stand alone testing Wed. Oct 29<sup>th</sup> to Mon. Nov. 3<sup>rd</sup>

DAQ and Run Control stand alone testing Wed. Oct 29<sup>th</sup> to Mon. Nov. 3<sup>rd</sup>

**Draft Schedule for Integrated STAR system testing:**

DAQ, Trigger, and Run Control Integration Mon. Nov. 3<sup>rd</sup> to Wed. Nov. 5<sup>th</sup>

DAQ, Trigger, and Run Control Integration ready for sub systems Wed. Nov. 5<sup>th</sup>

Tentative order for sub system integration, starting ~ Wed. Nov. 5<sup>th</sup>:

TPC

FTPC

SVT

FPD/BBC/ZDC

BEMC

EEMC

PMD

TOF

SSD

Testing, debugging, and tuning Integrated STAR Electronics systems ~ Mon. Nov. 10<sup>th</sup>.  
to Mon. Nov. 17<sup>th</sup>

**Draft Schedule for testing with counting gas in detectors:**

P10 Purge started into TPC Sun. Nov. 16<sup>th</sup>

TPC gas system turned on and in recirculation mode, Mon. Nov. 17<sup>th</sup>

Testing with gas, Mon. Nov. 17<sup>th</sup> through Thurs Nov. 20<sup>th</sup>

TPC gas purged (i.e. P10 purged out) Thurs. evening. Nov. 20th